Using reflective videos to enhance entrepreneurial learning

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ABSTRACT

Reflection is a key component of learning. However, getting students to reflect critically and in-depth can present a challenge. In this exploratory study we show how using reflective video clips can trigger and support reflection in entrepreneurship education. Data from 77 reflective video clips from a cohort of BA students in Denmark and Finland were analyzed to help understand how these clips had stimulated reflection, the nature of the reflection and its outcomes in terms of students' learning. Findings show that the video clips provided a useful vehicle for stimulating in-depth reflection, reflection that brought to the fore tacit assumptions, helped make sense of experiences and even led to a level of personal reframing in relation to entrepreneurship that changed career aspirations.

INTRODUCTION

Many of the readers of this journal will recognize the rapid expansion of entrepreneurship education (EE) that Rideout and Gray (2013, p. 330) describe as having 'skyrocketed'. At the same time, Rideout and Gray (2013) acknowledge the general paucity of research on the pedagogy of entrepreneurship in that interest in entrepreneurship has outpaced our understanding of what should be taught and how (Morris & Liguori, 2016), something Neck and Corbett (2018) confirm. Upon this backdrop, this paper demonstrates how reflective video clips can be used to advance reflection as a key element of EE.. This is the first study of its kind to evaluate the use of reflective videos in EE. While other studies in EE feature the use of videos (e.g. Clarke, 2008;

Wu et al. 2018), these do not set out directly focus on their potential in supporting reflection, and while reflective videos have been used in other disciplines, these have focused on evaluation of a specific action or performance (Giles et al. 2014 ; Smith, 2016).

Teaching students to reflect critically is recognized as an important but under-developed aspect of higher education (Brockbank & McGill, 2007; Smith, 2011; Kember, 2008) not least because of its important role in fostering deep or transformative learning (Brennan and Little, 1996). The need for further investigation into the reflection-learning relationship relates also to the complexity of this relationship (Dyer and Hurd, 2016). What has been claimed in general for higher education applies equally to EE where it has been acknowledged that the absence of critical reflection leads to limited entrepreneurial learning (Cope, 2003; Neck, Greene and Brush, 2014) and where reflection should be integral to the entire entrepreneurial learning process (Pepin, 2012). Indeed, EE is sometimes promoted on the basis that it promotes deep learning (e.g. Lackeus, 2015) and a survey of award-winning entrepreneurship educators also recognized the educator's role in facilitating learning at a deep level (Neck and Corbett, 2018). Moreover, an absence of reflection inhibits learning from experience (Kubberød and Pettersen, 2017; Neck and Green, 2011; Macht and Ball, 2016) a key component in entrepreneurial learning (Chang and Rieple, 2013; Minitti and Bygrave, 2001). In T.S. Elliot's words: "we had the experience but missed the meaning" (cited in Denton, 2011). An absence of critical reflection in entrepreneurship can have serious consequences for the entrepreneur, not least successive business failure (Ucbasaran et al., 2011). Moreover, in parallel to Schön's (1990) seminal work on the reflective practitioner's ability to reflect critically on one's work-related behavior, reflection can lead to more 'mature' prospective entrepreneurs (Nabi et al., 2010) who have a better understanding of themselves, their strengths and weaknesses and the potential challenges

faced when looking to start a new venture. It is clear that reflection plays a key role in EE and student's learning and unsurprisingly therefore represents an ongoing area of interest in the EE literature (Hägg and Kurczewska, 2016).

There are still aspects of the EE-reflection relationship that remain under-explored. For example, we need more insights into how EE might change the individual student (Lindh, 2017), and from a pedagogical perspective the EE literature says little about how to stimulate reflection, and what the resulting reflection might look like even though from our own experience and that offered in the literature (Kirkwood, Dwyer, Gray, 2014), reflection is often something students are asked to do.

Upon this backdrop, this paper uses data from 77 students in Denmark and Finland taking an entrepreneurship unit in their undergraduate programmes, to establish the extent to which a reflective exercise stimulated reflection with implications for students' learning. Specifically, this paper seeks to address the following research question: "What role can reflective videos play in enhancing learning in EE?". The literature review covers the role of reflection in EE, before then focusing on how reflection in EE might be stimulated. The paper then presents its methodology before presenting its results around three key themes that emerged from the data. The results are then reviewed considering the study's aim and the literature. We conclude the paper by bringing key insights together along with their implications for further research and practice in entrepreneurship education.

THE ROLE OF REFLECTION IN ENTREPRENEURSHIP EDUCATION

It is widely recognized that reflection is fundamental to learning (Brockbank & McGill, 2007; Smith, 2011), and that critical reflection plays a key role in deep learning (Boud, Cohen and Walker, 1993). Reflection, so Kember et al. (2008) might be classified as a 'generic capability' required by graduates in knowledge-based societies. We suggest that what holds for the reflection-learning relationship generally can be applied to EE specifically: the crucial role reflection plays in EE is widely acknowledged (e.g. Neck, Greene and Brush, 2014; Lindh 2017; Cope, 2003; Pittaway et al. 2011). However, in support of the aim of this study, we argue that the role of reflection applied to EE distinguishes itself in some respects from reflection in higher education.

Notwithstanding the 'about, for, through' debate in EE (Kakouris and Liargovas, 2020), it is regularly argued that entrepreneurial learning should include experiential components. Action is supportive of (Anderson & Jack, 2008), or indeed inherent to entrepreneurship and entrepreneurship education (Neck & Corbett, 2018). Here reflection plays a crucial role in making the connections between experiences and what these experiences mean (Dewey, 1997; Denton, 2011). As Hägg & Kurczewska (2016, p. 708) with reference specifically to EE suggest, "learning is developed into knowledge through reflecting on the experiences gained through actions taken". In essence we can identify the role of reflection in Kolb's (1984) widely cited and used learning cycle: anticipatory reflection in the 'plan' stage, and a posteriori (experiential) reflection in the 'check' stage. Furthermore, the critical role of reflection, including on what went wrong, is key to entrepreneurial success, otherwise one is condemned to repeatedly make the same mistakes (Ucbasaran, Westhead and Wright, 2011). Thus, we recognize the role reflection plays in making sense of experience in EE.

However, we also argue that reflection, in particular in-depth reflection that focuses not solely on the means but on the ends themselves (Schön, 1993) does not have to relate solely to experience. That reflection in EE can have various foci was demonstrated by Pittaway et al. (2011) who drawing on DeFillippi's (2001) work propose the following types of reflection in relation to EE:

1. "Observations of self in the context of the action"
2. "Observations of self in relation to others"
3. "Observations of learning acquired through the experience"
4. "Meta-observations which shift the frames of reference currently accepted by an individual" (p. 42)

Aligned with Pittaway et al.'s (2011) fourth point, meta-observations conform to Brockbank and McGill's (2007, p. 65) conceptualization of reflection in higher education that offers an element of transcending one's own boundaries as it "engages the person at the edge of their knowledge, their sense of self and the world as experienced by them", and is reflected in the EE literature in Hägg and Kurczewska's (2016:708) assessment that reflection in EE needs to "break old systems of thinking…to develop into new or modified understandings of reality" but also in Lindh's (2017) work where reflection is about ensuring the student assesses their dreams in relation to the environment in which their dreams can be realized. EE in this sense goes beyond a pure skills and competency focus; it transcends being able to do something well, or better; it changes who the individual is as evidenced in the accumulated literature on entrepreneurial identity development in EE (Donnellon, et al, 2014; Nielsen and Gartner, 2017)

Thus, here too it is suggested EE may distinguish itself from many other forms of education in that in a broad sense it is about changing who the individual is, how s/he sees and reacts to the world – again, to achieve this reflection is key.

Thus, in this transformatory or 'reframing' sense reflection in EE may lead to a reconsideration of one's career ambitions. Students may reflect on their selves as entrepreneurs and on the possibility also of seeing entrepreneurship as a career path. Here students' self-assessment can also relate to entrepreneurial skills and attributes because it has recognized that self-assessment is a requirement for personal development (e.g. Marienau, 1999; Schein, 1978), and is furthermore included in models of entrepreneurial intentions (via perceived feasibility in Shapero and Sokol, 1982, and via perceived behavioral control in the Theory of Planned Behavior, Ajzen, 1991).

In a final note to further illustrate Hägg and Kurczewska's (2016) contention that the relationship between EE and reflection is complex, we draw attention to the question of whether there can ever be too much reflection? How much reflection is good for entrepreneurship? Although providing an answer to the question goes beyond the scope of our paper, we feel it important in our review of the relationship between reflection and EE to draw attention to the inherent tension between action and reflection. What Langley (1995) with reference to managers describes as a tension between the ideas of 'extinction by instinct' (acting on impulse) and 'paralysis by analysis' (over-thinking) is of even greater relevance for the (prospective) entrepreneur who, arguably, has more at stake if things go wrong, but potentially more to gain if things go according to plan.

SUPPORTING REFLECTION

Sagar's (2015) stipulation that the entrepreneurship course be designed with students' reflection in mind aligns with the acknowledged importance of reflection to EE which leads to the question of how best to support reflection. Experience tells us we cannot simply expect students to reflect, at least not engage in in-depth reflection and the different means of trying to engage students in reflection is based upon the notion that not all entrepreneurship students are equally able, or in fact willing, to reflect on their own development and learning (Lindh, 2017)). Indeed, students must be ready to reflect indicating that openness towards reflection is necessary: "...an additional quality is necessary in the person—a quality of being present to the nature of the experience and an openness to its potential meanings" (Rodgers, 2002, p. 850). It is not possible to force reflection, certainly not any form of in-depth/critical reflection (Boud & Walker, 1993). Numerous tools have thus been advocated that are designed to stimulate reflection, from critical portfolios, through reflective diaries to critical case studies (e.g. Smith, 2011).

A common means to stimulate reflection that we draw on in this study is 'simply' to ask questions (inquiry approach)that act as reflection triggers (Bourner, 2003). This inquiry approach relates to the idea that reflection needs some form of stimulus (Kember et al. 2008). To further explain the benefits of an inquiry approach to stimulate reflection and learning and to underpin our use of video clips where students were required to respond to questions, we turn to Nonaka & Konno (1998) who describe a process for knowledge creation as including externalization and combination. Externalization involves giving external form to a thing you know or do. In relation to our study, video clips can be viewed as the actual talk on the clip where the student expresses these insights to the educator/researcher. The spoken word gives form to the ideas, and in the process, knowledge is created, or learning takes place when sharing these thoughts with another person. Combination is when explicit knowledge is combined and expanded upon through

sharing. Sharing insights involves more than just communicating viewpoints; knowledge is created by having to explain a position as indicated in the often-quoted line attributed to E.M Forster: "How do I know what I think until I hear what I say?"

The sharing of knowledge in the sense of having a generative conversation triggered by questions can prove beneficial in stimulating reflection and making the tacit explicit. Polanyi (2009) defines tacit knowledge as the knowledge we are not aware of having; "we know more than we can tell" (p.4). A generative conversation uses in-depth contemplation, discussion, and dialogue to increase awareness of one's own deeply held, yet frequently tacit, assumptions.

To summarize, we have provided a review of the crucial role reflection plays in EE as well as highlighting calls for further research into reflection in EE While much emphasis is placed on the importance of reflection to help make sense and learn from experience, the role and focus of reflection extends beyond experience. Reflection in EE can develop a better understanding of oneself, one's skills and weaknesses and, ultimately, can assist in reframing one's view of oneself in relation to entrepreneurship (achieving a different perspective of reality) and strengthen or weaken the desire to pursue entrepreneurship as a consequence. Reflection can help make explicit tacit knowledge within a broader notion of reflections on observations of the self. A number of pedagogical tools have been suggested to support critical reflection, including an inquiry approach, but to date, with EE, the use of reflective videos has not been explored. The next sections describe our use of reflective videos and how these can be used to support critical reflection in EE.

METHODOLOGY

Different methodologies have been used to explore the role of reflection in EE. Typical for many is the use of a qualitative methodology. For example, Kakouris (2015) used discussions while Kirkwood et al. (2014) used written student reflections. Because of the novelty of our study, we decided to use an exploratory, largely inductive approach; we did not therefore set out to test any specific theory or hypotheses. This also meant that when it came to data analysis we had no concrete expectations but were curious and open minded and let the data guide us (Saunders et al., 2012). We had a data-driven and open approach throughout.

Data comprised of student's self-shot video clips (N=77) whereby first and foremost, the purpose of the video clips was to support students' learning: the video clips were a means of collecting data but more importantly a tool for learning. Students were asked to produce a short video documentary or narrative (2-3 minutes each) about their own personal entrepreneurial development and how they see themselves as entrepreneurs. Therefore, our methodological approach is qualitative and based on participatory digital storytelling where students produce digital stories constructed from their 'own subject positions and told as personal narratives' (Gubrium and Harper, 2013, p. 125). Further into the research process where the researcher is watching each video clip, the methodological approach moves from participatory digital storytelling towards a more participatory ethnographic approach as the researchers observe and take notes on what happens in each video clip (Gubrium and Harper, 2013). In this case the researcher was participating both as a teacher and as a researcher. Hence, the process has auto-ethnographic traits.

Gubrium et al. (2014) support reflection through videos as being fruitful which supported out approach . Also, the method had been piloted before in the Finnish context and

initial success had been noticed. We also thought that this would give the students the opportunity to tell their own stories in a way that would meet the needs of the courses.

We also wanted students to feel at ease, to create a comfortable environment to reflect and share their ideas. The title of the exercise was "Me as an entrepreneur" whereby we were seeking from students a reflective explanation of their perceptions of entrepreneurship and how they personally stood in relation to entrepreneurship. The students were given the following instructions (translated from Danish, in Finland the class was taught in English ,): "Describe yourself in an entrepreneurial or intrapreneurial perspective in a 2-3-minute video clip". It was also emphasized that the creation of the clip, the layout, editing etc. was not important. The focus was on their talk and their reflection on the topic. To make the task easier and to turn focus on the talk and reflective practice detailed instructions on how to work with video in a task like this one was shared with the group. However, we did not provide too many guidelines related to the reflective practice, although some students did ask for some clarification, as we wanted students to feel free to tell their own stories. Students were in other words encouraged not to focus too much on the technical issues related to making the clip, but instead to really try to talk to us (the instructors/teachers) in the clip. Also, the clips could be produced in English, Swedish, Finnish, or Danish. The Finnish group consisted of mainly Swedish-speaking Finns and we consider being able to use their first language is important in a reflection practice like this one.

The video clips, which comprised part of the summative course assessment for the Danish cohort and were a voluntary formative exercise for the Finnish students (although students were strongly advised to undertake the exercise), were submitted at the end of the course. Thus, although mandatory, or at least strongly encouraged for the Finnish students, students were nonetheless given some creative freedom with regard to content. At the beginning

of the course, students were requested to consent to allowing their video clips being a part of a research project. Furthermore, as these videos clips contain personal descriptions and information the students were informed about their anonymity both in writing along with the description with the task and verbally when meeting the students in the classroom. Although the sample comprised of two distinct groups, the rationale here was not to conduct a comparative study but to enlarge the sample and achieve an element of data triangulation (Denzin, 1978; Saunders, 2016). Thus, we argue that where results were similar across two distinct cohorts, we have greater confidence in our results' transferability (Hammersley, 1992).

Data were collected from 77 undergraduate students at universities of applied sciences who were taking classes in the academic year 2015-2016. The Finnish participants (N=43) were first-year students in Business or IT-s () The Danish participants (N=34) were second-year students of Public Administration with their course focusing heavily on how to introduce innovation in the public sector. All students were taking a class in entrepreneurship. Students' ages varied. The Finnish students were about ten years younger than the average age of thirty-four of the Danish students.

The teaching approach in both courses can, according to Piperopoulos & Dimov (2015) be characterized as practically oriented. There was not much traditional top-down teaching but rather many teamwork and dialogic activities. Students were expected to take an active part and assume responsibility for their own learning. The educator acted as a coach or facilitator in some of the learning situations. The collective approach was encouraged in the form of study circles, workshops, discussions, and other collaborative exercises. The purpose was to make the learning situation more interesting and address the topics from different angles.

The analytical process followed a traditional data driven (conventional) content analysis (Hsieh & Shannon, 2005). As part of the analysis all video clips were reviewed a number of times and observations were cross-analysed by the the researchers to enhance reliability (Saunders et al., 2012). A tool for the annalysis in the form of coding scheme in Excel was develped.. The scheme contained of themes, categories, extracts and notes by the researchers. It was decided that the reduction or deconstruction of the many tales or stories into overall themes and categories was useful to see if the stories had something in common (Gibbs, 2015; Kvale, 2007) and we did this via clustering and categorization of the reflective monologues. Later, the stories were recontextualized and discussed between the researchers as a way to check for misunderstandings or possible loss of the original meaning. Breaking the stories down into content-based themes and categories follows Lieblich, Tuval-Mashiach, and Zilber's (1998) description of categorial-content coding, very much a 'standard' approach in the analysis of qualitative data (Hsieh et al, 2005; Easterby-Smith et al., 2002). Lieblich, Tuval-Mashiach, and Zilber (1998) Identified themes (in the digital stories, the videoclips) comprised: *entrepreneurial mindset, learning, own qualities, job experience, family, risks, change, 'me as an entrepreneur', start-ups, social entrepreneurship, intrapreneurship and traits and qualities of an entrepreneur*. These did also have a function in guiding the results' discussion /the data-driven approach.

RESULTS

The results section is organized according to three key themes that emerged during the interviews and that we felt supported our research aim, rather than deriving from the literature We acknowledge that the type of reflection engaged in here is, given the nature of the task students were given, perhaps more critical or in-depth than would feature across an entire programme, so, for example, we do not ask students to reflect on the value of a particular

technique (e.g. calculating an internal rate of return) to tackle a technical problem (e.g. comparison of two investment decisions). However, it is getting students to reflect at higher levels which presents more of a challenge to educators (Boud, Cohen and Walker, 1993; Kember, 2008), hence our focus here.

First, we discuss the extent to which the use of video clips has led to a stimulation of reflection, and at which levels this reflection occurs. Next, we describe the focus of reflection and how students reflected on their past experiences, in particular relating to work experiences and family background, before covering reflection and self-awareness in relation to strengths and weakness in the final section. Quotations are provided to illustrate the points being raised.

The manifestation of reflection

As educators, it may be common for us to build opportunities for reflection into our assignments, whereby we frequently only have access to the outcome of the reflection. With the video clips we could see reflection taking place (see Pepin, 2012 who discusses reflection taking place during course of action), literally before our eyes as students developed causal explanations, but also demonstrated typical visual signals associated with reflection (e.g. frowning, pausing, reasoning with themselves etc.); often it felt as though students were talking to an old friend. Although a few students did read from prepared notes, most students seemed very relaxed and comfortable talking to the camera. As students were permitted to choose their own locations for the video shoot some students chose places of significance to them in relationship to their entrepreneurship experience. For instance, one of the students chose to film the video outside standing in a field looking up to the sky - as the students explains - to

symbolize the motto of the Danish Class: "The sky is the limit". That said, the majority chose a comfortable, familiar location to shoot the video (e.g. at home).

As relatively experienced educators (all authors have over ten years' experience teaching in HE) we felt we were typically gaining more in-depth reflection from students compared to when asking students to reflect on paper or openly in class. We believe this in-depth, (self)critical reflection was aided in many instances by the familiar and relaxed surroundings chosen for the exercise. The classroom is not always a neutral and relaxed space, at least not for everyone. The self-selected, 'neutral' or relaxed setting allowed even the more reluctant students to 'open up' and share their thoughts, without the fear of being immediately judged by their peers (or even by the educator).

One of the issues that appeared clear to us from viewing the video clips was the in-depth or critical level of reflection that was taking place. As mentioned, the task given to students itself was not focused on the demonstration of a particular skill or application of a specific technique that might have been more prone to lower levels of reflection. Overall, though, as researchers we felt students offered us a glimpse of their world, were largely (and unexpectedly for us) candid in the reflection on the task provided to them.

That at least some of the reflection went deeper than surface level was demonstrated by the reframing, also meta-observations (Pittaway et al. 2011), that occurred especially in relation to the nature of entrepreneurship, students' stance towards it, but also their understanding of intrapreneurship. In fact, many students viewed themselves and their competencies in a new light as a result of reflecting on their course. While the course had itself increased students' knowledge of entrepreneurship there was a sense that the task to 'simply' reflect on themselves as entrepreneurs had led them to take this knowledge further and consider what it meant to them

personally. Entrepreneurship wasn't this academic, objectified 'entity' out there, detached from their lifeworld (Heidegger, 1962), it was something they clearly set in relation to themselves.

For some students, this reflection had tangible consequence in that it led to action. For example, one of the (Danish) students explained how it has been a development from not being able to see opportunities to having gained ideas through the course and as a result now following up on these ideas to the extent that he had almost been too busy to do the video clip.

Further evidence of reframing was provided by students, in that before participating in the course, many students had no intention of becoming entrepreneurs whereas after the course many now saw it as a viable career alternative.

"Before I was thinking more about negative sides like risk, now more positive sides, like self-employment, to have a job one loves and likes." (student, Finland). Others discussed the possibility of becoming/being your own boss after experiencing that entrepreneurship is for all and not special human beings.

For some students the reflective videos raised an awareness of a quasi-awakening that had taken place as a result of the entrepreneurship course; they saw themselves, their abilities, hopes and dreams in a new light. We would even go so far as to argue that for some, reflecting on their future careers and entrepreneurship led to a new awareness of oneself as a person and potential entrepreneur.

Putting things into perspective

Although the study was not designed to be comparative, the inclusion of two cohorts rather than one offered an element of data triangulation (Denzin, 1978). Where findings were confirmed across both cohorts this will strengthen the validity of the study (Saunders et al.

2016). Thus, in the analysis of the data we did notice some differences between the two cohorts with the key difference relating to the focus of reflection given students' varying levels of general life experience the Danish students could draw on, compared to the Finnish cohort. As mentioned above, the Danish students were on average ten years older than their Finnish counterparts and this resulted in more comparisons with a broader external context and especially to work-life experiences. These comparisons usually related to family members who were entrepreneurs or practical work experiences (this relates to Pittaway et al.'s, 2011, observation of self in relation to others and also observation in relation to one's experience).

This is not to suggest the Finnish students did not relate their experience of the entrepreneurship module to their context. While the Danish students may have had more work experience to reflect upon, the Finnish students regularly drew on family experiences and entrepreneurship, not always positively:

"To become an entrepreneur is not my first choice (this because her father was one). All your time goes to work, 60-hour work week. To believe in yourself I find really important." (student, Finland).

Generally, stronger opinions were offered by those students who had some experience of entrepreneurship in the close family. Both positive and negative experiences were reflected upon. In general, the Finnish students with the family experience of entrepreneurship were more negative, and the students said that they were more reluctant about becoming an entrepreneur since they had seen what adverse effects it could bring about. Students indicated the financial risk was one part, but a more significant risk they saw was often the time that the entrepreneurs put into their work was extremely high. The negative effects could be a parent that never had time because of their own company, leading to constant stress, burnout, and financial insecurity.

By contrast, students acknowledged entrepreneurship not just in relation to business start-up but also in terms of being a vital skill to be put into use: ”intrapreneurship is a good way to start” (using entrepreneurship/entrepreneurial skills; Finland). This notion of applying entrepreneurial skills in their future workplaces was something that appeared in many students’ reflections.

Staying with the reflections relating to significant others theme, some students directly mentioned how their upbringing in a ”traditional” environment had influenced their view on their own (lacking) competencies related to becoming an entrepreneur. A Danish student explained how growing up in a house where “children should be seen but not heard” had affected their view on becoming an entrepreneur in the sense that they saw themselves as having to follow the same paths as their parents (hence not becoming entrepreneurs).

“In my upbringing, children were supposed to be seen, but they should not be heard, and we were reminded to not think we were anything special. So, therefore, I still have a hard time believing in my own abilities” (student, Denmark).

The course changed that view in relation to the student’s own view of themselves (growth in self-confidence) as well as recognizing that to be an entrepreneur is not something just for the select few. Similar perceptions were reported by others. It had been stressful to have parents who spent almost all their time on their own businesses, barely taking time for holidays and so on. The students did not want to copy this behavior. For some students the reflective exercise demonstrates elements of a cathartic experience no less.

These examples are provided to illustrate how the reflective videos were stimulating critical reflection. By exploring the outcomes of reflection we are able to obtain an indication of the level and focus of the reflection achieved.

Self-criticality and self-awareness

The degree of introspection and self-criticality can serve as a good measure for the level of reflection that occurs, and here students provided some evidence of in-depth reflection, as also illustrated above with regard to reflection on familial relationships. Reflecting on one's own strengths and weaknesses is something that the reflective video-clips were able to induce, again, serving to indicate that students were engaging with the task:

"The more I admired those people I felt small about myself. It was too big for me to handle. So, from feeling that into really thinking about myself as an entrepreneur as I do recently is quite a big change to me. I don't see entrepreneurship as elusive as I did" (student, Finland).

"I need to put everything into 'boxes,' I have to have all things structured. I like to make a structured agenda, and I will follow it from start to finish, and I have a whole process along the way that I'm going through which I would like to control."

These excerpts serve to illustrate the student getting a better sense of themselves, of who they are as a person, their abilities, and preferences (not just in relation to entrepreneurship).

Students also regularly referred to specific skills. Thus, one student mentioned becoming more aware of how she now better appreciated her interpersonal skills, her ability to empathize with others and commenting this was something "I want to exploit". Students talked about both personal skills and knowledge and more practical skills they saw as crucial for an entre-/intrapreneur. Risk taking, being creative, artistic, or innovative were mentioned regularly.

"Actually, one of my really great strengths is that I'm good at making contact with other people. I'm good at talking with other people, I'm good at understanding someone else's

situation, I have a high empathy for other people. This applies both professionally, but also personally, so that is definitely something I want to exploit" (student, Denmark).

Furthermore, students reflected on how their competences had developed as a result of the program: "it was a requirement for us to think creatively and it's usually not my strong side, but I succeeded to some extent" (student, Denmark). The quote shows evidence of students being aware of their own abilities and reflecting on their personal development, however small in the observer's eyes, these nevertheless presented a transformation for the respective student.

As one would expect, the levels of reflection and self-awareness and hence reframing varied from student to student. From the educator's perspective – being familiar with the students - there is a clear link between general skills and class activity and the level of reflection. Thus, only a few students chose to reflect from a theoretical stance using the recommended in-class text to explain the entrepreneurial perspective.

However, what surprised us was the fact that the relatively straightforward task, together with the video clip format, led to both 'reflection' and 'critical reflection' the highest forms of reflection according to Kember et al.'s (2008) reflection scheme.

DISCUSSION

Our exploratory study has confirmed that using reflective videos within the context of an assignment has been able to get students to move beyond a superficial level of reflection and learning, moving, for example, beyond Bloom's, (1956) learning levels of knowledge and comprehension, or moving beyond Kember et al.'s (2008) 'habitual' and 'understanding' levels of reflection to 'critical reflection'. The level of critical reflection is in part at least related to the

assignment brief, i.e. specifically asking students to reflect on their position vis-à-vis entrepreneurship.

Although we did not expect all students to engage equally with the task, and not all did, students on the whole did engage with the exercise. Thus, the videos were able "to break old systems of thinking or old assumptions held, and through this process develop into new or modified understandings of the reality" (Hägg & Kurczewska, 2016, p. 708), or what Pittaway et al. (2011) refer to as meta-observations and subsequent reframing. Although reflection on experience is often what is considered when promoting reflection within an EE context, in relation to their position towards entrepreneurship the reflective videos offered numerous foci (Pittaway et al. 2011). We note here that younger students with less work-related experience (Finnish students) substituted the work-related reflection with reflection on family experiences. Moving into the sociological domain, we can identify how the student's habitus (Bourdieu, 1992) shapes the focus of reflection and their entrepreneurial dispositions (see also Outsios and Kittler, 2017).

It is commonly suggested EE is action- or practice-orientated (Neck & Corbett, 2018; Rideout & Gray, 2013; Williams, 2019) and here reflection can assist turning experience into knowledge (Hägg & Kurczewska, 2016). We had ample evidence that the videos were being used to make sense of experiences, not just classroom experiences, but also from individuals' broader life experiences that have been recognized as contributing to entrepreneurial learning (Kubberød & Pettersen, 2018; Preedy & Jones, 2015). From an educator's standpoint this was pleasing to see as the boundary between the somewhat artificial world of the classroom and students' lives began to be blurred. Students were bringing their experiences into the classroom and vice versa. This is also a form of turning tacit knowledge into explicit knowledge. Thus, by

asking students to vocalize their assumptions and tacit beliefs these were made explicit; they gave external form to something they tacitly knew (Nonaka & Konno, 1998).

Because we did not set the study up following an experimental design it is impossible to say whether students generally reflect more verbally or in written form. However, what we can claim is that allowing students to reflect verbally, with an added introspective element provided by the visual (video), effectively presenting themselves to the camera, permits at least those students who do struggle with writing to reflect critically on their experiences and relationship to entrepreneurship, thereby leading to enhanced, even deep learning. Thus, while written reflections are still the norm within, higher education and EE, reflective videos offer an alternative to students who may not be as comfortable with writing.

Allied to this point is another of our key findings, and staying with the artificiality of the classroom, was the role of setting to stimulate in-depth reflection; the familiar and relaxed surrounding participants selected when shooting the video clips had a positive impact on reflection. The classroom is not necessarily a neutral space and hence not a reflection-inducing setting. In our study even the most reluctant student could share their thoughts and be honest without (immediate) judgement. As Lindh (2017) has argued, not all students are necessarily willing to reflect, nor are students necessarily willing to be challenged or to challenge themselves and their perceptions (Wraae and Walmsley, 2020). Consequently, by given students an opportunity to reflect in an environment chosen by themselves helped overcome some of this reluctance. In this sense the project with the video clips has been unique and a form of assessing and learning that to some extent, in our view, has been underestimated at least in these learning environments.

Finally, and most crucially for the students and further underlining the depth of reflection that occurred, the videos led to a reframing of many students' positions towards entrepreneurship. It should be remembered that our sample of students did not represent a 'typical' entrepreneurship student seeking to start their own business, but students who were involved in programmes that contained an entrepreneurship component. In light of this, the power of the reflective videos to enable this level of reframing was interesting to observe. Students showed their ability to reflect on their thoughts about entrepreneurship in relation to their own identity and whether entrepreneurship was a role they could perceive themselves in (Nielsen & Gartner, 2017; Wilson, 2004). In this sense, students were able to transcend their own boundaries (Brockbank & McGill, 2007; Pittaway & Thorpe, 2012; Wang & Chugh, 2014) and question their own identities (Wilson, 2004). This required in-depth reflection and, crucially, moving outside students' comfort zones to gain a deeper insight into themselves and their own capabilities. The benefits of this reflection on one's self, one's strengths, weaknesses and career preferences extend to benefits for students' overall career development given that, these are the foundations of career counseling (Brown, 2002; Parsons, 1909). As much as we might be pleased to see students' improved attitudes towards entrepreneurship, these were only the outcomes, the symptoms of what we were really interested in which was to engage students in critical reflection.

CONCLUSION

At the outset of the study was the question as to how videos can be used to stimulate reflection in EE. Reflection, and particularly critical or higher order reflection has long been recognized as an important part of learning in higher education (Dyer and Hurd, 2016; Kember,

2008). The introduction and literature review evidenced that in EE too, an increasing number of papers recognize a) the importance of reflection and b) the complexity of the relationship between reflection and learning as well as c) limited studies that focus on how (critical) reflection can be supported within an EE context. On this backdrop this is the first study of its kind to investigate the use of reflective videos as a means to stimulate critical reflection in EE. Consequently, we offer a number of key insights and practice-related outcomes to demonstrate the impact and relevance of our work to the entrepreneurship educator and more importantly with implications for the entrepreneurship student.

Overall, our study has demonstrated that using reflective videos can present the entrepreneurship educator with a valuable tool to stimulate in-depth reflection that could therefore be used alongside more typical approaches (e.g. reflective logs or diaries). While reflective videos have been used in different ways in other contexts (Giles et al. 2014 ; Smith, 2016) they have not, as far as we were able to identify, been discussed in an EE context. Here we have explored and described how they could add to the entrepreneurship educator's pedagogical toolbox, in particular supporting students who perhaps find it difficult to write reflexively, who need a neutral or reflection-inducing space to do so, and who might be spurred on in their reflections by the introspective/self-reflective notion of standing in front of a lens recording one's thoughts. Reflective videos may assist in bringing forth tacit assumptions, help make sense of experiences and even lead to a level of personal reframing in relation to entrepreneurship that changes career aspirations, akin to Pittaway et al.'s (2011) meta-reflections. In sum, we have provided evidence that used within the context of an assignment, reflective videos hold a lot of power to stimulate learning and change at an individual level.

Our study opens avenues for further research as well as offering some practical implications. Brockbank and McGill (2007) recognize that reflection can be enhanced by dialogue. In our study students did not directly engage in dialogue, rather engage in a monologue or reflective presentation of themselves. Students were given feedback and as such an element of dialogue did exist although we did not seek to then understand the impact of our feedback on students' learning. Future studies may try to understand the role of dialogue in supporting reflection in EE. That said, a truly open dialogue, touching on personal issues is likely to require a high degree of trust between individuals which may present a barrier in the EE setting, although could be found in an entrepreneur mentoring-type relationship (Nabi et al., 2019).

We cannot say anything conclusive about students becoming more effective learners as a result of the inclusion of reflective videos because we did not directly assess this, although Pittaway et al. (2011) argue that there is a link between reflection and more effective learning. However, the level of reflection undertaken by the students seems to suggest such a link might exist. This leads to the issue of the assessment of reflection. While students did not draw as much on the literature that was offered in the lectures as we had anticipated, students appeared to enjoy the freedom to reflect without too many guidelines. We recognize that many students request guidelines and that, as per the inquiry approach (Bourner, 2003) discussed in the literature review, a series of questions can open up paths for reflection (reminiscent of a Socratic Dialogue), but our study demonstrates that there are also benefits for reflection of not channeling students' thoughts too much. The same logic applies within a mentoring context where the mentee needs to identify their own solutions (Garvey, Stokes and Megginson, 2009) or in an interpretive-type enquiry where the researcher does not want to impose their way of viewing the world (Strauss and Corbin, 1998). Open reflection was likely also assisted by the formative

nature of the assignments that were set, i.e. students could experiment without fear of failing the assignment or receiving a poor grade. In a situation where students become strategic learners (Harvey & Knight, 1996), where learning is reduced to achieving a grade, this may constrain the willingness to reflect more widely as this bears the risk of not meeting a pre-determined learning target. Thus, our advice to practitioners would be to ensure that there is room for students to display originality, not to set too rigid guidelines for fear of limiting reflection. We recognize though, that frequently it is precisely students who request very tight guidelines so as to minimize the risk of failure. This is an important issue, one worthy of further consideration, but one that goes beyond the scope of the paper.

In terms of limitations, we acknowledge the possibility of participants providing socially desirable responses in an attempt also to paint themselves in a positive light (Paulhus, 2002), or offering information that is felt might please the educator even though we, as educators, emphasized that this was not a 'right or wrong' assignment and stressed a desire for an honest answer. While we cannot discount this possibility, we did not get the impression when viewing the videos that students' reflections were simply fabrications, uttered in the desire to seek approval from the educator. In fact, we were surprised by students' candor, especially from those students who suggested their past encounters with entrepreneurship, frequently vicariously via family members, had been anything but positive. It is possible that our sample of non-entrepreneurship students differed in this regard from many studies who sample students on dedicated entrepreneurship programmes. We imagine that positive attitudes towards entrepreneurship are more prevalent amongst students of entrepreneurship, than students studying other programmes that include an entrepreneurship component as occurred here. Given the novelty of formal entrepreneurship education to these students the potential for

entrepreneurial learning may have been greater than for students who already had some entrepreneurship education. Again, this is something that could be tested in future studies.

Finally, we recognize the exploratory nature of the study which has however opened up avenues for further, deductive approaches. Thus, with larger samples and using more theoretically derived hypotheses tests could be undertaken to establish differences between groups (entrepreneurship vs. non-entrepreneurship students, students with prior entrepreneurial experience vs. those with no or limited entrepreneurial experience) or the nature of the video reflection (e.g. length, assignment brief, stage of programme). Nonetheless, as the first study of its kind to focus on the use of reflective videos within the context of EE we believe that the study has made a valuable contribution to those seeking alternative means of stimulating reflection.

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